

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/CA2004/000005	International filing date (day/month/year) 05.01.2004	Priority date (day/month/year) 08.01.2003
International Patent Classification (IPC) or national classification and IPC G01B5/00		
Applicant HYDRO-QUEBEC		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of _____ sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/CA2004/000005

Box No. I

Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-9 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 1-20 _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on _____
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 1/4-4/4 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/CA2004/000005

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims		NO
Inventive step (IS)	Claims	1-20	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents:

D1: WO-A2-01/96808;

D2: US-A-5 963 030.

1. Document D1, which is considered to be the prior art closest to the subject matter of claim 1, describes (see figures 11 and 13; the references between parentheses apply to said document):

an apparatus (28) for moving measurement devices (12) along a pipe, which apparatus includes a collar (14) having two ends (90) each provided with a closing means (92) for closing said collar around said pipe (3), supporting means (10) for supporting said measurement devices (12) relative to said collar, and free wheels (82, 96) that each have a shaft, are mounted on said collar and are positioned in such a way as to enable said collar to be moved along said pipe.

2. The subject matter of claim 1 differs from this

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

known apparatus in that at least one wheel is driven by gear means coupled to flexible transmission means capable of remotely transmitting a rotational motion.

It follows that the subject matter of claim 1 is novel (PCT Article 33(2)).

3. The problem that the present invention is intended to solve can therefore be considered to be that of developing an inspection device mountable on, and movable along, the outer surface of said pipe, including along bends and/or pipe sections that an operator cannot reach.

The solutions known from the prior art propose actuators or various pulling systems (see, for example, D2, column 3, line 66 to column 4, line 11) for moving the measurement devices along straight sections of pipe. However, these known solutions require rails or guide systems, which are previously mounted on, or attached to, the pipe but which do not enable the device to be moved along bends.

4. The solution to this problem, as proposed in claim 1 of the present application, is not found in the prior art and cannot be derived in an obvious manner therefrom, for the following reasons:

The collar that supports the measurement devices can be moved along a pipe by virtue of one or more

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

drive wheels mounted on the collar *per se*. Said wheels are rotated by a gear coupled to the wheel shaft, said gear, in turn, being coupled to a remotely controlled flexible transmission device.

This solution simplifies the design of the facility to be inspected (by dispensing with the need to provide stationary guide systems) and reduces the constraints of performing manual inspections in hard-to-reach and/or hazardous areas (for example, radioactive areas) during operation of the facility.

It follows that this solution is considered to involve an inventive step (PCT Article 33(3)).

5. Claims 2-19 are dependent on claim 1 and, as such, therefore also fulfil the PCT requirements of novelty and inventive step.
6. Independent claim 20 describes an apparatus for moving a measurement collar along a pipe, which apparatus has the same features as the apparatus in claim 1.

As a result, the subject matter of claim 20 is novel and inventive.